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AMENDMENT TO THE CLAIMS

1. (Currently Amended) A medical device comprising a composite having an inorganic substrate and a polymer ~~covering~~ applied on all of the substrate surfaces, the polymer forming a structure shaped differently from the structure of the substrate, and providing the form of the device.
2. (Original) The medical device of claim 1 wherein the inorganic substrate comprises metal.
3. (Original) The medical device of claim 1 wherein the inorganic substrate comprises a ceramic.
4. Canceled
5. (Previously Presented) The medical device of claim 1 wherein the polymer is selected from the group consisting of ~~polyetheretherketones~~, polyacetals, polyethersulfones, polyarylsulfones, polyetherimides, polycarbonates, and polysulfones.
6. (Original) The medical device of claim 1 wherein the polymer has an average thickness of at least about 10 microns.
7. (Original) The medical device of claim 1 wherein the polymer has an average thickness from about 100 microns to about 2000 microns.
8. (Original) The medical device of claim 1 wherein the medical device comprises a heart valve prosthesis, the heart valve prosthesis comprising a component that comprises the composite having the inorganic substrate and the polymer material.

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9. (Original) The medical device of claim 1 wherein the polymer material has structure forming a slot, hole, pin, button, barb or anchor.

10. (Previously Presented) A medical device comprising a flexible composite component comprising an inorganic substrate and a polymer member covering the substrate, wherein the flexible composite component can be bent through a cross section of the flexible component composite, and wherein the polymer member contacts bodily fluids and separates the bodily fluids from the substrate.

11. (Original) The medical device of claim 10 wherein the inorganic substrate comprises a metal foil with a thickness less than about 500 microns.

12. (Original) The medical device of claim 10 wherein the polymer is selected from the group consisting of polyurethanes, polydimethylsiloxanes and polytetrafluoroethylenes.

13. (Original) The medical device of claim 10 wherein the polymer member has a thickness from about 10 microns to about 500 microns.

14. (Original) The medical device of claim 10 wherein the polymer member has a thickness from about 50 microns to about 300 microns.

15. (Previously Presented) The medical device of claim 10 wherein the medical device comprises a heart valve prosthesis and the composite component comprises leaflets.

16. (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 180 degrees without extending the flexible composite component beyond its elastic limit.

17. (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 180 degrees with a radius of curvature of about the

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thickness of the composite without extending the flexible composite component beyond its elastic limit.

18. (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 60 degrees for about 40 million cycles without significant structural failure.

19. (Previously Presented) The medical device of claim 10 wherein the flexible composite component can be bent about 60 degrees for about 400 million cycles without significant structural failure.

20. (Currently Amended) The medical device of claim 10 wherein the composite further comprises comprising a diamond-like carbon coating over at least a portion of the polymer member.

21 - 30 Canceled

31. (Previously Presented) The medical device of claim 1 wherein the polymer is crosslinked.

32. (Previously Presented) The medical device of claim 1 wherein the polymer is rigid.